UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,999	12/29/2000	Ali Najib Saleh	CIS0008C1US	8353

33031   7590   02/27/2007
CAMPBELL STEPHENSON ASCOLESE, LLP
4807 SPICEWOOD SPRINGS RD.
BLDG. 4, SUITE 201
AUSTIN, TX 78759

EXAMINER
NGUYEN, HANH N

ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _Amendment filed on 11/13/06._
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _See Continuation Sheet_ is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _38-70,111,113-124,126-137,139-150,152-163,165-177,179-191,193-205 and 207-218_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
  Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
  Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 38-70,111,113-124,126-137,139-150,152-163,165-177,179-191,193-205 and 207-218.

DETAILED ACTION

Response to Amendment

Amendment filed on 11/13/06 has been entered.

The 112 2nd paragraph against claim 177 is maintained.

Claims 58-65 have been examined and are rejected under 102(e) as being anticipated by Allen et

al.

Claims 40-52 have been addressed in claim 38 such as link cost field (hop count field); request

field (inherently included in PACK message); initialization packet (col.5, lines 53-57), negative

response field (inherently included in the reserve bandwith if not having enough bandwidth)

etc,..

Refer to claim 38, Applicant argues on page 40 of the Remark that Allen et al. does not disclose

the protocol packet is configured to record a protocol packet path from the origin node to the

target node.

The claimed invention does not require how the protocol packet is configured to functionally

record a protocol packet path. Examiner agrees with Applicant's assertion addressing that Allen

et al. discloses that a tandem node records hopcount, upstream node Id and bandwidth (step 710,

fig.7) if the hopcount field in the pack message is less than a hopcount limit. The pack message

is discarded if its hopcount is greater than the hopcount limit (step 706, fig.7). However, since

the claimed limitation only requires in general that "the protocol packet is configured to record a

protocol packet path from the origin node to the target node"; and does not require how the step

of recording packet path is performed.

Further as the following tandem nodes receive and copy the pack message (see steps 714, 716,

fig.7), eventually, the pack message will arrive at the destination node carrying a record of the

packet path from the source node to the destination node.

Regarding claim 111, applicant argues that Fukushima et al. does not disclose said at least one

node identifies a node in a network for which said sending node seeks link state advertisement.

Examiner does agrees because Fukushima et al. discloses, in *col.2, lines 15-20; checings if*

each of routers has received network link state information and in col.2, lines 27-32, " if there

is any other router from which the router has not received hello packet for longer than a fixed

period, the router decides that a failure has occurred in this other router".

Claims 163, 177, 191 and 205 are mood in view of new art.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
subject matter which the applicant regards as his invention.

Claims 163, 177, 191, 205 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Rergarding to 112 2nd paragraph in claims 163, 177, 191, 205, examiner does not agree

with applicant 's response because "said processor receiving a hello packet at a downstream

node" is followed by the step of " sending an acknowledgement to said downstream node" is not

defined because it is not clear "what element sends an acknowledgement to said downstream

node" and   "The downstream node can not receive a hello packet at send an acknowledgement

to it self" which is the downstream node. However, it would have made sense for "said processor

to receive a hello packet **at** a downstream node" and " sending an acknowledgement **from** said

downstream node".

Claims 179-190 are rejected because they depend on claim 177.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

Claims 38-52, 58-65 are rejected under 35 USC 102(e) as being anticipated by Allen et

al. (US pat. 5,748,611).

In claim 38, Note that the protocol packet in the claimed invention is used to transmit

from an origin node via neighbor nodes in order to find a target node. Examiner uses the PACK

message in Allen et al. as the protocol packet because the PACK message (see col.6, lines 25-

45) is a forward restoration message transmitted along each of the source A 's spans to tandem

nodes which rebroadcast the PACK message to destination node; see fig.5 and 6).

In particular, Allen et al. discloses a networking protocol for a network comprising:

a protocol packet sent from an origin node to neighbors of the origin nodes to find the target

node (see fig.5 & 6, steps 504, 506, 508; col.6, lines 25-55; PACK messages are transmitted

from a source node to tandem nodes which rebroadcast the PACK messages until a destination

node receives it); the protocol packet is configured to record a protocol packet path from the

origin node to the target node (see col.6, lines 37-42; each PACK message includes a hopcount

field which is incremented as the PACK message traverses the network to reflect the number of

spans traversed; see further at col.7, lines 25-50); the protocol packet comprises information

regarding a topology of at least a portion of said network (see fig.7, the number of hopcount

fields increase while the PACK message traverses the network shown in steps 702, 710, 712,

714, 716 represent the remain topology of network beside the failed link).

In claim 39, Allen et al. discloses protoco packet comprises header data (address of

source and destination node in the PACK message) and command-specific data (PACK message

comprises restoration request). See Abstract.

In claims 40-52, the limitations of theses claims have been address in claim 38.

In claim 58, Allen et al. discloses protocol packet is restore path packet (see fig.3, step

306; col.5, lines 47-53 or pack message at fig.5, steps 504).

In claim 59, Allen et al. discloses a virtual path ID field (see col.6, lines 7-15; path ID).

In claim 60, Allen et al. discloses a path length field / link cost field (hop count field

reflects the number of spans traversed by the Pack message; see col.6, lines 37-42).

In claim 62, Allen et al. discloses protocol packet is a create path packet (see col.5, lines

53-57; fig.3, step 308; creating a restoration path).

In claim 61, Allen et al. discloses path array (fig.11 shows spans SE, AE, EC ED, each

having respective spare links). See col.8, lines 55-60.

In claims 63 and 65, the limitations of this claim have been addressed in claims 59, 60

and 61.

In claim 64, Allen et al. discloses a delete path packet (see fig.3, step 312; releasing

network resource that were allocated to the restoration of disrupted path; see further in abstract;

last 3 lines in clean up phase).

Claims 111, 113-124, 126-137, 139-150, 152-163, 165-177, 179-191, 193-205 and 207-

218 are rejected under 35 USC 102(e) as being anticipated by Fukushima et al. (Pat. 6,490,246

B2).

In claims 111, 124, 137, 150, Fukushima et al. discloses, a method of processing a get

link state advertisement packet comprising receiving the get link state advertisement packet

(fig.8, step 121, receiving a Hello packet/ routing protocol packet) at a downstream node (at

routers 30; col.11, lines 55-60; fig.1), wherein the get link state advertisement packet (the Hello

packet) is sent by a sending node (from router calculating unit 11; fig.2), the get link state

advertisement packet comprises at least one node identifier (see col.1, lines 45-50; the hello

packet comprises a list of other routers'Ids in the same network); said at least node Id (each

router) identifies a node in the network for which the sending node seeks link state advertisement

(see col.2, lines 15-20; checks if each of routers has received network link state information and

in col.2, lines 27-32, " if there is any other router from which the router has not received hello

packet for longer than a fixed period, the router decides that a failure has occurred in this other

router"). The downstream node and said sending node are nodes in the network (the two routers

are connected to the same network); sending at least one link state advertisement from the down

stream node to the sending node (fig.8, steps 122, 124 and fig.9. steps 131, 133; network link

state information received from neighbor node); and sending an acknowledgement of the at least

one link state advertsement to the downstream node (fig.9, step 135 and fig,10, step 143,

sending update information).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 163, 177, 191, 205 are rejected under 35 USC 103(a) as being unpatentable over

Fukushima et al. (Pat. 6,490,246 B2) in view of Dobbins et al. (US pat. 5,825,772).

In claims 163, 177, 191 and 205, Fukushima et al. discloses receiving a hello packet at a

downstream node, wherein said hello packet comprises a link state advertisement (see col.2, lines

10-14; each router receives hello packets and and network link state information); processing

said link state advertisement (see col.2, lines 15-20; manage states of other routers in the network

and check if each of those routers has received network link state information), wherein

processing said link state advertisement includes sending the link state advertisement from the

downstream node (checking each of routers mentioned above inherently comprising sending link

states from the router through other routers in the network). Fukushima et al. does not disclose

sending an acknowledgement to said downstream node, wherein said acknowledgement

acknowledges all link state advertisements in said hello packet. Dobbins et al. discloses, a poll-

response procedure wherein slave switch acknowledges database description packets (hello

packet) sent by the master switch. The database description packet comprises link state

advertisement (see col.13, line 65 to col.14, line 5 & lines 17-35). Dobbin further discloses flood

advertisements are acknowledged in link state acknowledgement packets (see col.14, lines 47-

63). Therefore, it would have been obvious to one ordinary skilled in the art to apply the link

states topology exchange taught by Dobbin with Fukushima determine current network

topology, current link, node states,

Claims 113-123, 152-162, 165-176 and 207-218 are rejected because they depend on

their parent claims.

Claims 126-136, 139-149, 179-190 and 193-204 are rejected under 35 USC 103(a) as

being unpatentable over Fukushima et al. (Pat. 6,490,246 B2).

Claims 126-136, 139-149, 179-190 and 193-204 are rejected because they depend on

their parent claims 124, 137, 177 and 191 respectively.

Claims 53-57, 66-70 are rejected under 35 USC 103(a) as being unpatentable over Allen

et al. (US pat. 5,748,611) in view of Fukushima et al. (Pat. 6,490,246 B2), and further in view of

Dobbins et al. (US Pat. 5,825,772).

In claims 53-57, Allen discloses the pack message comprise hop count filed, but does not

that the protocol packet is a hello packet, test packet, get link state advertisement packet

comprising link state advertisement field, neighbor field. Fukushima et al. discloses the protocol

packet is a hello packet (see fig.8, see col.10, lines 20-22; routing protocol packet is hello

packet). Dobbin discloses advertisement requested is specified by link state ID (link state

advertisement field) and list of names and costs to each of its neighbors (neighbor field). See

col.14, lines 17-20 and lines 50-53). Therefore, it would have been obvious to one skilled in the

art to have hop count field, link state advertisement, neighbor field, link state ID in the pack

message of Allent et al. in order to determine current network topology and control failed

connection in the network.

In claims 69 and 70, Allen does not discloses protocol packet is a link down packet. The

office notice notice is taken that it is well-known skill in the art that when a link or a router is

down, a protocol packet such as a link down packet is transmitted to the sender router to notify

that the router has been down. For the configured packet, Fukushima discloses, in col.2, lines

25-35, that if a router has not received hello packet from other routers for longer than a fixed

period, the router updates the contents of routing table and establishes another path to avoid the

faulty router (protocol packet is a configure packet). Therefore, it would have been obvious that

the protocol packet can be a link down packet to notify that a router has failed or a configured

packet when the router establishes an alternate path.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Perlman et al. (Pat. 5,128,926);
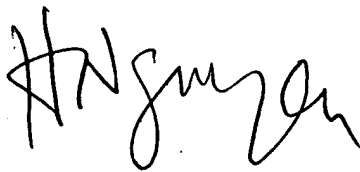
Mahany et al. (Pat.6,374,311 B1);

Young (US pat. 5612,950).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Nguyen whose telephone number is 571 272 3092. The examiner can normally be reached on Monday-Thursday from 8:30AM to 4:30PM. The examiner can also be reached on alternate.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Field, can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 703-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hanh Nguyen

HANH NGUYEN
PRIMARY EXAMINER